Manitoba Health Statistical Update on HIV/AIDS

1985 - Oct 2000

Communicable Disease Control Unit
Public Health Branch
Manitoba Health

Manitoba

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November 20, 2000

Dear Colleague:

Enclosed, please find the ***Manitoba Health Statistical Update on HIV/AIDS, 1985 to October 2000***. A separate report is included also comprising statistics up to and including November 15, 2000.

In addition to our standard report describing HIV and AIDS cases by age-group, gender and mode of transmission, we have included the following charts for your review:

- Percentage of HIV Positive Cases by Region of Residence, Jan 1985 to Oct 2000
- Percentage of New Positive HIV Cases by Ethnicity in Manitoba, Jan 1999 to Oct 2000
- Risk Profile for HIV Positive Cases in Manitoba, January 1985 to October 2000
- Age of HIV Positive Cases with MSM Risk Profile in Manitoba, January 1985 to October 2000
- Percentage of Prenatal Screening Specimens Requesting HIV Testing in Manitoba, January 1996 to September 2000

For your additional reference, we have included the November 2000 HIV/AIDS Epi Update from Health Canada entitled: *National HIV Prevalence and Incidence Estimates for 1999: No Evidence of a Decline in Overall Incidence*. Other national reports, including *HIV and AIDS in Canada, Surveillance Report to June 30, 2000* may be accessed electronically at the following web site:

www.hc-sc.gc.ca/hpb/lcdc/publicat.html

I would like to acknowledge the contribution of Michelyn Jones, Federal Field Surveillance Officer, HIV/AIDS and STD, Health Canada in the preparation of this report. As always, your comments and suggestions regarding both the content and organization of the statistical update are welcome. Please do not hesitate to contact me directly at the number above or by e-mail at DeNowicki@health.gov.mb.ca. For program-specific questions, please contact Pat Matusko, HIV/AIDS Program Coordinator at (204) 788-6728 or by e-mail at PMatusko@health.gov.mb.ca.

Sincerely,

Debbie Nowicki
CDC Epidemiologist

Cc. P. Matusko
M. Jones

Enclosure

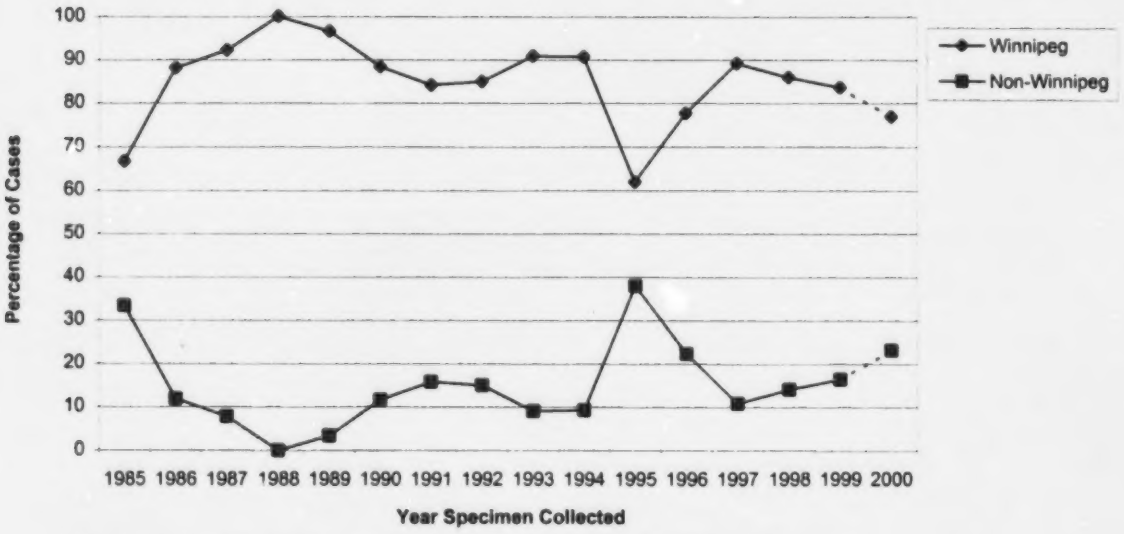
MANITOBA HEALTH STATISTICAL UPDATE ON HIV/AIDS 1985 TO OCTOBER 2000

HIV – January 1985 to October 31, 2000

Between January 1 and October 31, 2000, 52 new cases of HIV were reported in Manitoba; 33 males and 19 females, bringing the total number of HIV positive individuals to 845 since 1985 (see attached report - Table 1). As illustrated in Figure 1 (attached report), there has been a consistent increase in the number of females testing HIV positive since 1994. While females represent 16% of all HIV cases reported since 1985, 8% of HIV positive individuals were accounted for by females between 1985 and 1994 as compared to 26% between 1995 and October 2000. The majority of new cases, both male and female, are between the ages of 20 and 39 years (Table 2).

Slightly more than 80% of all reported cases were residents of Winnipeg (at the time of testing), while roughly 10% of cases resided outside of Winnipeg (Figure 3). In recent years however, there has been a gradual increase in residence such that the percentage of cases residing outside of Winnipeg has increased (see figure below). This observation has important implications regarding the availability of HIV prevention and education resources outside of Winnipeg. Further, this finding encourages health care providers to consider and offer HIV testing.

Percentage of HIV Positive Cases* by Region of Residence, Manitoba, January 1985 to October 2000



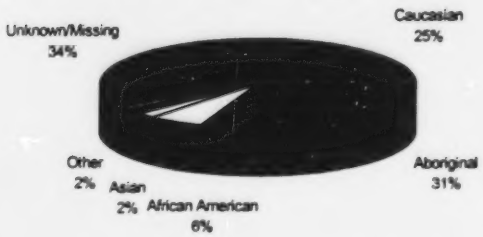
*Cases with an out-of-province or unknown residence (at the time of testing) are excluded.

Self-Reported Ethnicity

With the introduction of the *Notification of HIV Infection Form* in January 1999 (see appendix), information describing ethnicity among newly reported HIV cases is available. As presented in the charts below, 31% (16/52 cases) of the newly identified cases during January to October 2000 were self-reported as Aboriginal, while 25% (13/52 cases) were self-reported as Caucasian. These numbers increase to 47% and 38% respectively when cases with unknown or missing ethnicity are excluded (n=18) due to incomplete data or missing notification form. Other ethnic groups self-reported include Asian (n=1) and African American (n=3). When these groups are further examined by mode of transmission, the two reported categories for Aboriginals include injection drug use (10/16 cases; 63%) and heterosexual activity with person(s) at increased risk of HIV (6/16 cases; 38%). For Caucasians, the most common transmission categories are MSM (8/13 cases; 62%) and heterosexual activity with

person(s) at increased risk of HIV (5/13 cases; 39%). Note that between January 1999 and October 2000, the majority of new HIV cases were self-reported as Aboriginal (39 cases, 31%) and Caucasian (34 cases, 27%). These values increase to 45% and 39%, respectively, when cases with missing or unknown ethnicity are excluded (n=39). This information is important as it further characterizes at-risk populations to support HIV prevention and planning initiatives and for allocation of educational and treatment resources within Regional Health Authorities and the province. However, it is important to note that these data are self-reported and reflect individuals coming forward for testing only. Misclassification may occur at the time of follow-up leading to under-representation. At the same time, more than one-third of HIV cases reported between January 1999 and October 2000 are incomplete (missing/unknown ethnicity). As a result, some groups may be under-represented.

Percentage of New Positive HIV Cases by Ethnicity in Manitoba, January to October 2000 (N=52)



Percentage of New Positive HIV Cases by Ethnicity in Manitoba, January 1999 to October 2000 (N=126)

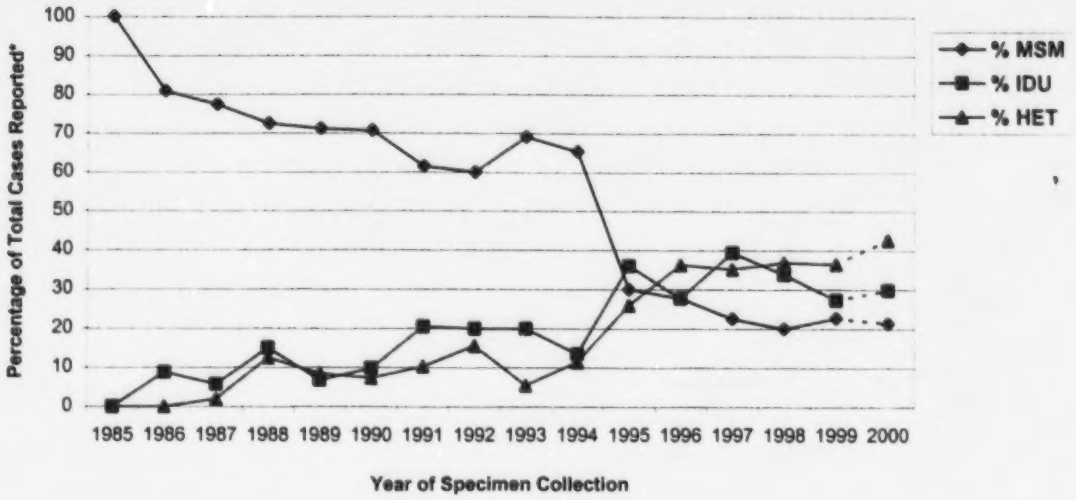
HIV Transmission Patterns

Of the 19 females testing HIV positive between January and October 2000, the predominant modes of transmission were heterosexual activity with a person(s) at risk of HIV infection (7 cases) and injection drug use (7 cases). For newly positive males, the predominant modes of transmission were heterosexual activity with person(s) at risk of HIV (13 cases), MSM (10 cases), and injection drug use (7 cases). Table 4 (attached report) describes the modes of transmission for all HIV positive cases by gender. When all cases are reviewed from 1985, the primary modes of transmission for males were MSM, heterosexual activity with person(s) at risk of HIV, IDU and MSM/IDU. For females, the most common transmission categories included heterosexual activity with persons at risk of HIV and IDU (Figure 4).

When examined over time (see graph below), it is evident that the proportion of individuals reporting their transmission category as MSM has declined since 1985 and has fallen substantially since 1994. The proportion of cases reporting heterosexual activity with person(s) at increased risk of HIV has increased steadily since 1995 reaching a high of 42.6% in 2000; although data for this time period are for ten months only. In total, the three transmission categories of MSM, IDU and heterosexual activity with persons at risk of HIV represent more than 80% of all HIV antibody positive individuals identified between January 1985 and October 2000.

It is important to mention that these data reflect individuals coming forward for testing and are subject to any changes or patterns in those presenting for testing. Further, it is important to emphasize that the mode of transmission is self-reported. However, collection of such information is critical to furthering our knowledge of current trends and provides evidence and support to direct planning and prevention services.

Risk Profile for HIV Positive Cases in Manitoba, January 1985 to October 2000

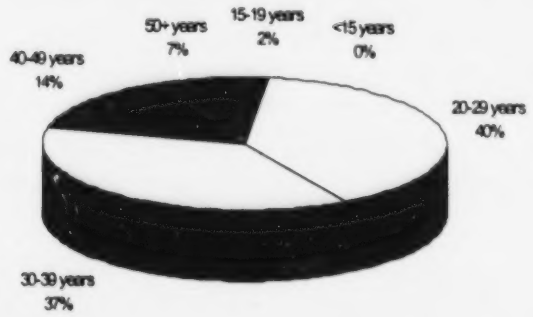


*Cases with no identified risk (NIR) were excluded from the denominator.
MSM is men having sex with men.
IDU is injection drug use including MSM/IDU.
HET is heterosexual activity with person(s) at increased risk of HIV.

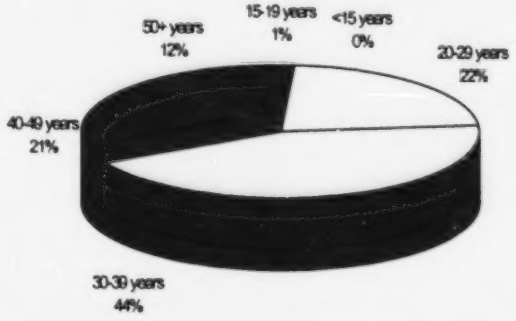
Age of HIV Positive Cases Among MSM Risk Profile

Between January 1995 and October 2000, there was a slight increase in the age of HIV positive cases with mode of transmission reported as MSM when compared to the earlier time period of 1985-1994. This is particularly evident in those individuals between the ages of 30 and 39 (44% vs. 37%). Alternatively, there has been a decrease in those individuals between the ages of 20 and 29 years of age, from 40% during 1985 to 1994 to 22% for the period 1995 to 2000.

Age of HIV Positive Cases with MSM Risk Profile in Manitoba, January 1985 to December 1994 (N=322)



Age of HIV Positive Cases with MSM Risk Profile in Manitoba, January 1995 to October 2000 (N=82)

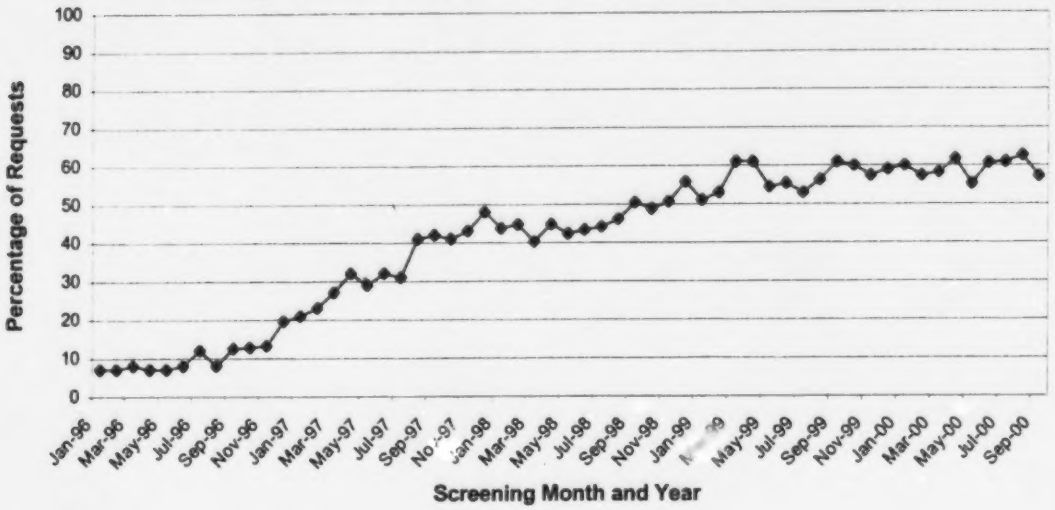


HIV Testing in Pregnancy

In 1994, a provincial policy on HIV testing in pregnancy was developed such that: "*All physicians should offer HIV testing and counseling to all pregnant women. The decision to be tested should be voluntary and based on informed consent*". This policy has since been revised and reads: "*It is strongly recommended that all physicians provide appropriate information and offer testing for HIV to all pregnant women as part of routine prenatal care. The decision not to be tested should be voluntary and*

based on informed choice". When current statistics are examined, it is evident that HIV testing has increased steadily since 1996 reaching a plateau of about 61% in 1999. Similar results are evident. Strategies are being considered to increase prenatal HIV testing rates particularly in women who are not accessing prenatal care.

Percentage of Prenatal Screening Specimens Requesting HIV Testing in Manitoba, January 1996 to September 2000



AIDS – January 1985 to October 31, 2000

Between January 1 and October 31, 2000, 10 new cases of AIDS were reported; 9 males and 1 female. These reports bring the total number of cases to 188 since 1985 (Table 5). The number of reported AIDS cases has declined somewhat since 1995, due in part to early diagnosis and improved treatment of individuals with HIV infection. Seventy-seven percent of individuals reported with AIDS have died. However, delays in reporting of both cases and deaths make it difficult to determine precisely the incidence and case-fatality rate.

APPENDIX

Reporting of HIV and AIDS in Manitoba

In Manitoba, HIV testing is non-nominal. A prescribed patient code is assigned when a physician completes the appropriate requisition. The code includes the last two letters of the mother's maiden name, the patient's year of birth, day of birth, gender, regional health authority (as defined by number) and first three characters of the patient's postal code. Prior to August 1998, the former Manitoba Health region (as defined by letter) was assigned to identify the patient's region of residence. Further, postal code was not included.

All HIV antibody testing is carried out at the Cadham Provincial Laboratory (CPL). Positive test results are subsequently forwarded to the Director of Communicable Disease Control as required by the *Diseases and Dead Bodies Regulation, Public Health Act*. It has been the practice of surveillance staff to enter case information into the HIV Database *after* the physician (requesting the test) has verified the test result as a new or existing case. However, there have been extensive delays in the completion of and return of the *Notification of HIV Infection Form* by health care professionals. Consequently, all HIV positive test results are considered new cases unless otherwise advised by the appropriate health care professional. This practice will serve to avoid under-reporting the incidence of HIV in Manitoba, however, duplicate cases will be included at this time. The Communicable Disease Control (CDC) Unit is working with Regional Health Authorities towards a satisfactory resolution in this regard.

Twice a year, line-listed data from the HIV Database are extracted and forwarded to the Centre for Infectious Disease Prevention and Control, Health Canada in Ottawa for inclusion within the national report, *HIV and AIDS in Canada*. Although non-nominal, the prescribed patient code is stripped prior to release. Instead, a sequential case number is assigned.

Provincially and nationally, AIDS cases and deaths are reportable by physicians. A federal reporting form, the *AIDS Case Reporting Form*, is used for this purpose. New AIDS cases and deaths are reported to the Director of Communicable Disease Control and subsequently forwarded to the Centre for Infectious Disease Prevention and Control. The Centre works diligently with other provinces to ensure that there are no duplications in the counting of cases. The variations you might see from previous reports with respect to the number of AIDS cases and deaths may be accounted for by delays in reporting as well as the fact that in Manitoba, the database is updated immediately once surveillance staff are notified that a particular case has been accounted for in another province.

NOTIFICATION OF HIV INFECTION (Form prescribed pursuant to subsection 43(2) The Public Health Act: P210)

DESIGNATED PATIENT CODE _____
(As per CPL requisition: Last two initials of mother's maiden name; year of birth; day of birth; gender; RHA of residence code; 3-digit forward sortation postal code)

PHYSICIAN NAME _____

LABORATORY REQUISITION NUMBER _____

SPECIMEN DATE _____/_____/_____
yyyy mm dd

PRINCIPAL REASON FOR TEST (ONE ONLY)

- ☐ Requested by patient (no risk identified)
- ☐ Risk factor present (asymptomatic)
- ☐ Symptomatic ☐ STD work-up
- ☐ Travel ☐ Insurance
- ☐ Prenatal
- ☐ Other (specify) _____

GENDER ☐ Male ☐ Female ☐ Trans-gender

If female, pregnant? ☐ Yes ☐ No
Receiving anti-retroviral drug(s)? ☐ Yes ☐ No

M/S ☐ Unmarried ☐ Married/CL ☐ S/D/W

COUNTRY OF BIRTH
☐ Canada ☐ Other _____
If other, year of arrival in Canada _____

ETHNICITY
☐ Caucasian ☐ African/African-American
☐ Aboriginal ☐ Asian
Other _____

If aboriginal, treaty status: ☐ Treaty ☐ Non-treaty
Band number: _____

CLINICAL STATUS

Are HIV-related symptoms present? ☐ Yes ☐ No

Does the patient have AIDS? ☐ Yes ☐ No

PAST HISTORY

1) Previous HIV testing? ☐ Yes ☐ No ☐ Unknown
If yes:
Date of most recent negative test: _____
Date of first positive test: _____

2) History of STD ever ☐ Yes ☐ No

3) STD in past 3 months ☐ Yes ☐ No

4) Previous blood or tissue donation ☐ Yes ☐ No

If yes, most recent date _____

Location _____

RISK INFORMATION
(Since 1978; check all client characteristics that apply)

	Yes	No	Unk.
1) Has had sex with:			
A male	☐	☐	☐
A female	☐	☐	☐
2) Has had heterosexual sex with:			
A bisexual partner	☐	☐	☐
An unknown partner	☐	☐	☐
Multiple sex partners	☐	☐	☐
A sex trade worker	☐	☐	☐
A client of a sex trade worker (i.e. patient is a sex trade worker)	☐	☐	☐
A person with known/suspected HIV	☐	☐	☐
An injection drug user	☐	☐	☐
A person from an HIV endemic area	☐	☐	☐
Another high risk partner	☐	☐	☐
3) Has used needles for recreational (non-medical) drug injection	☐	☐	☐
4) Has received blood or blood products a) Prior to Nov. 1985	☐	☐	☐
b) After Nov. 1985	☐	☐	☐
5) Has received blood or blood products for treatment of a coagulation disorder			
a) Prior to Nov. 1985	☐	☐	☐
b) After Nov. 1985	☐	☐	☐
6) Has been exposed to HIV in an occupational setting (e.g. needlestick injury)	☐	☐	☐
7) Born to an HIV positive mother	☐	☐	☐
8) Born in or resident of an HIV-endemic country	☐	☐	☐

9) Has had:
- ☐ **tattoo**
- ☐ **body piercing**
- ☐ **acupuncture**
- ☐ **blood contact from bite, altercation, etc.**

10) Other exposure which could have been source of HIV infection, specify _____

11) No identifiable risk factor ☐

Interview for partners at risk to be done by: **Physician** Yes ☐ No ☐ **Public Health Nurse** Yes ☐ No ☐

If by public health nurse, physician must first obtain informed consent from client. Has informed consent been obtained? ☐ **Yes** ☐ **No**

CONTACT INFORMATION ON PARTNERS TO BE FOLLOWED BY PUBLIC HEALTH:

Name _____ Home tel _____ Work tel _____
Alias _____ Sex ☐ F ☐ M
Address _____ Postal Code _____ Age/Birth date _____
Occupation _____ Place of Employment/School _____
☐ Live-In Partner ☐ Single Other_____ Lives with ☐ Parents ☐ Informant ☐ Other
Characteristics: Height_____ Wt._____ Eye Colour_____ Hair_____ Complexion _____
Sexual Exposure: (First)_____ To_____ (Last) Parenteral(First)_____ To_____ (Last)
Notified: Yes ☐ Date _____ No ☐ By Whom _____

Manitoba Health Statistical Update on HIV/AIDS

1985 - OCT 2000

CDC Unit
Public Health Branch
Manitoba Health

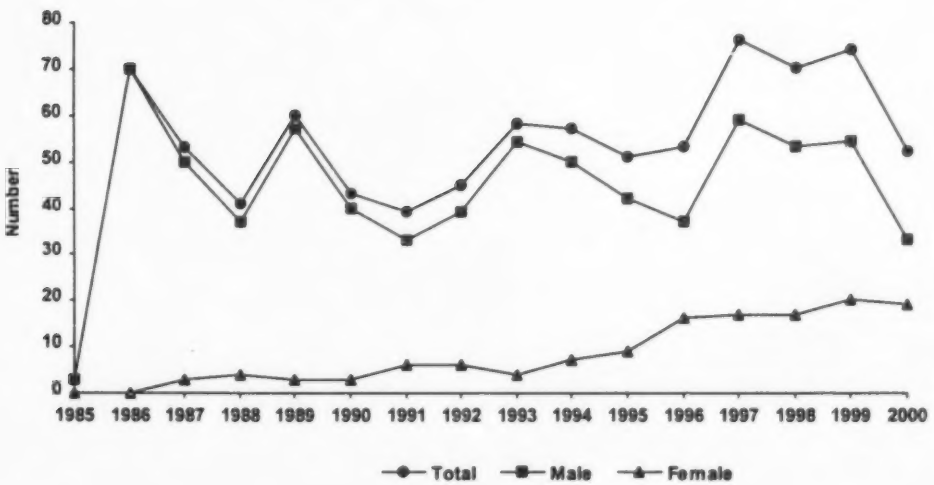
MANITOBA HEALTH

Table 1. NUMBER OF INDIVIDUALS TESTING HIV ANTIBODY POSITIVE, 1985-2000*

Year	Male	Female	Total
1985	3	0	3
1986	70	0	70
1987	50	3	53
1988	37	4	41
1989	57	3	60
1990	4[illegible]	3	43
1991	33	6	39
1992	39	6	45
1993	54	4	58
1994	50	7	57
1995	42	9	51
1996	37	16	53
1997	59	17	76
1998	53	17	70
1999	54	20	74
2000	33	19	52
Total	711	134	845

* to 10/31/2000

Figure 1. NUMBER OF INDIVIDUALS TESTING HIV ANTIBODY POSITIVE, 1985-2000*



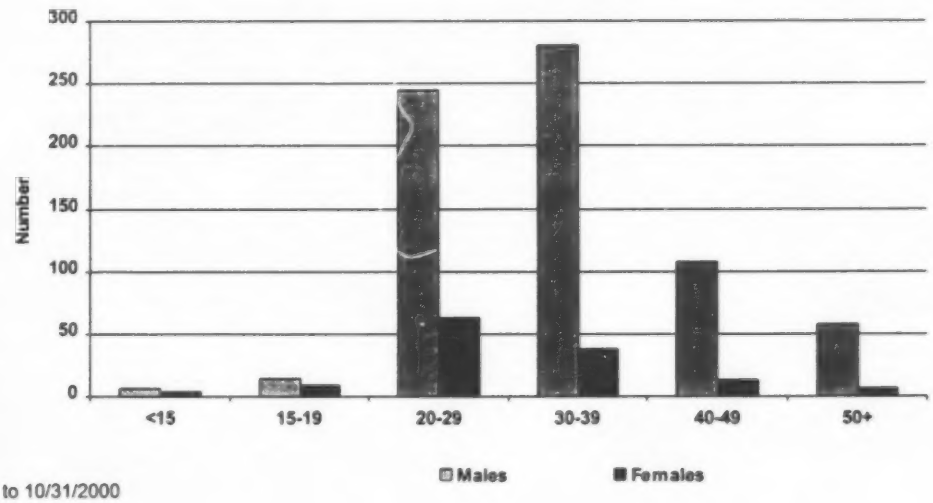
to 10/31/2000

Table 2. NUMBER OF INDIVIDUALS TESTING HIV ANTIBODY POSITIVE BY AGE AND GENDER, 2000*, 1999, CUMULATIVE 1985-1998 AND 1985-2000*

Age	Gender	2000*	1999	1985-1998	1985-2000*
		JAN-OCT	Total	Total	Total
<15	M	0	1	5	6
	F	0	0	4	4
15-19	M	1	0	13	14
	F	1	1	7	9
20-29	M	6	8	231	245
	F	12	9	42	63
30-39	M	13	31	236	280
	F	3	6	29	38
40-49	M	7	7	94	108
	F	2	4	7	13
50+	M	6	7	45	58
	F	1	0	6	7
Total	M	33	54	624	711
	F	19	20	95	134

* to 10/31/2000

Figure 2. NUMBER OF INDIVIDUALS TESTING HIV ANTIBODY POSITIVE BY AGE AND GENDER, 1985-2000*

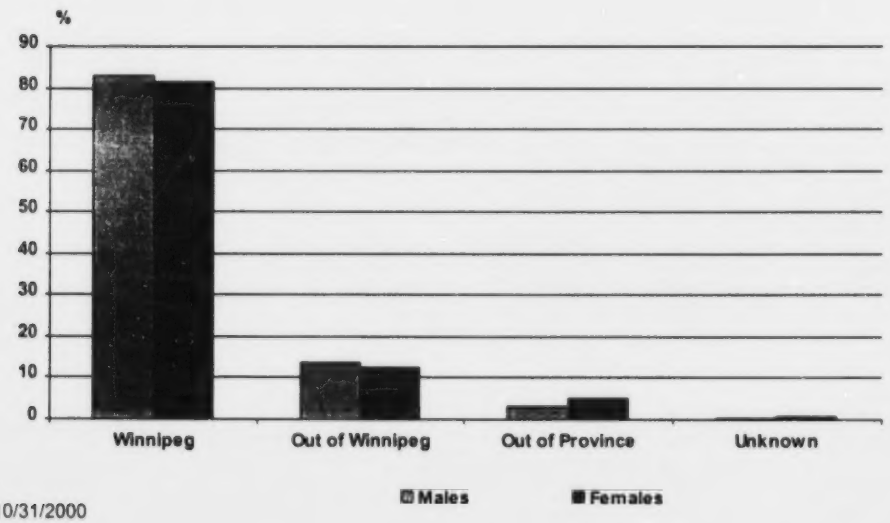


to 10/31/2000

Table 3. NUMBER OF INDIVIDUALS TESTING HIV ANTIBODY POSITIVE BY GEOGRAPHIC RESIDENCE AND GENDER, 2000*, 1999, CUMULATIVE 1985-1998 AND 1985-2000*

Geographic Residence	Gender	2000*	1999	1985-1998	1985-2000*
		JAN-OCT	Total	Total	Total
Winnipeg	M	26	44	520	590
	F	14	17	78	109
Brandon	M	1	0	0	1
Brandon, Marquette, S. Westman	M	0	1	17	18
	F	0	0	1	1
N. Eastman	M	0	1	0	1
	F	0	1	0	1
S. Eastman	M	0	1	0	1
N. Eastman, S. Eastman	M	0	0	11	11
	F	0	0	2	2
Interlake	M	1	3	20	24
	F	1	0	2	3
Central	M	3	2	21	26
	F	3	0	3	6
Parkland	M	0	1	4	5
	F	0	0	1	1
Norman	M	0	0	3	3
	F	1	0	0	1
Burntwood	M	2	1	4	7
	F	0	1	1	2
Unknown	M	0	0	2	2
	F	0	1	0	1
Out of Province	M	0	0	22	22
	F	0	0	7	7

Figure 3. PERCENTAGE OF HIV POSITIVE INFECTIONS IN MANITOBA BY REGION OF RESIDENCE AND GENDER, 1985-2000*



to 10/31/2000

Table 4. NUMBER OF INDIVIDUALS TESTING HIV ANTIBODY POSITIVE BY TRANSMISSION CATEGORY AND GENDER, 2000*, 1999, CUMULATIVE 1985-1998 AND 1985-2000*

Transmission Category	Gender	2000*	1999	1985-1998	1985-2000*
		JAN-OCT	Total	Total	Total
MSM	M	10	15	379	404
MSM/IDU	M	0	4	40	44
Heterosexual'	M	13	14	75	102
	F	7	10	39	56
IDU	M	7	10	64	81
	F	7	4	34	45
Perinatal	M	0	1	1	2
	F	0	0	1	1
Recp B/B products	M	0	3	25	28
	F	0	1	5	6
Endemic"	M	1	3	16	20
	F	2	1	9	12
NIR	M	2	4	25	31
	F	3	4	6	13
Total	M	33	54	625	712
	F	19	20	95	134

MSM = men having sex with men

IDU = injection drug use

Recp B/B products = recipient of blood/blood product

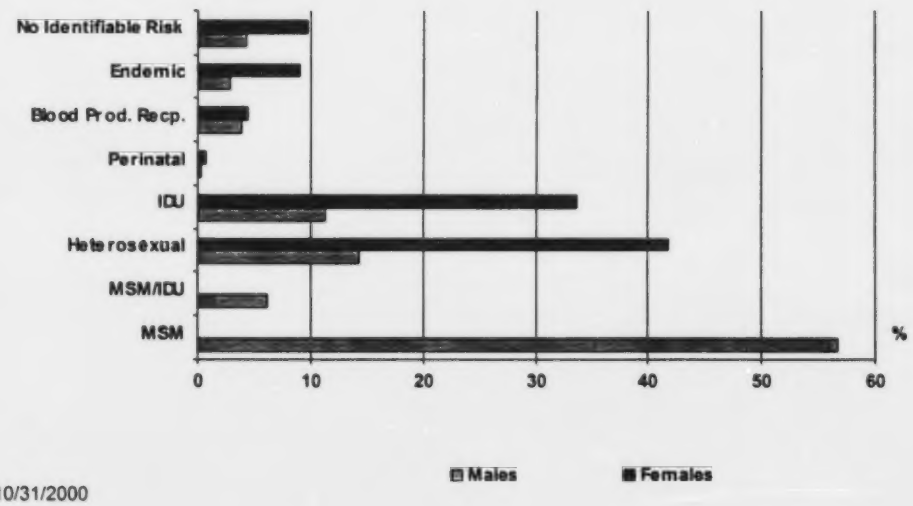
NIR = No Identified Risk

' Heterosexual activity includes persons reporting heterosexual activity with person(s) at risk of HIV infection

" Endemic includes persons originating from or residing in countries with a high prevalence of HIV

* to 10/31/2000

Figure 4. PERCENTAGE OF HIV POSITIVE INFECTIONS IN MANITOBA BY TRANSMISSION CATEGORY, 1985-2000*



to 10/31/2000

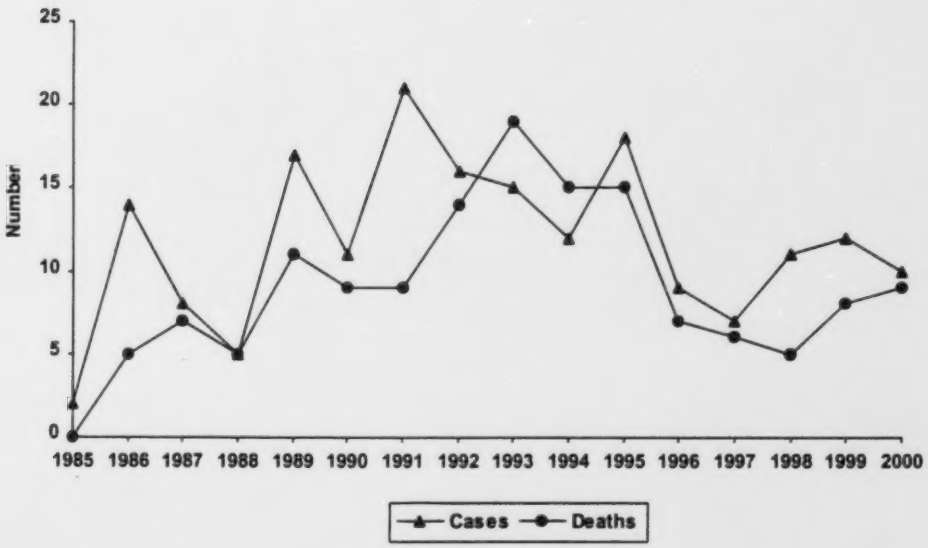
Table 5. NUMBER OF REPORTED AIDS CASES AND DEATHS, 1985-2000*

Year	Cases Reported"	Deaths Reported"
1985	2	0
1986	14	5
1987	8	7
1988	5	5
1989	17	11
1990	11	9
1991	21	9
1992	16	14
1993	15	19
1994	12	15
1995	18	15
1996	9	7
1997	7	6
1998	11	5
1999	12	8
2000	10	9
Total	**188**	**144**

" Because of delays in reporting, the number of reported cases and deaths does not necessarily represent the number of cases diagnosed or deaths occuring during the period.

* to 10/31/2000

Figure 5. NUMBER OF REPORTED AIDS CASES AND DEATHS, 1985-2000*



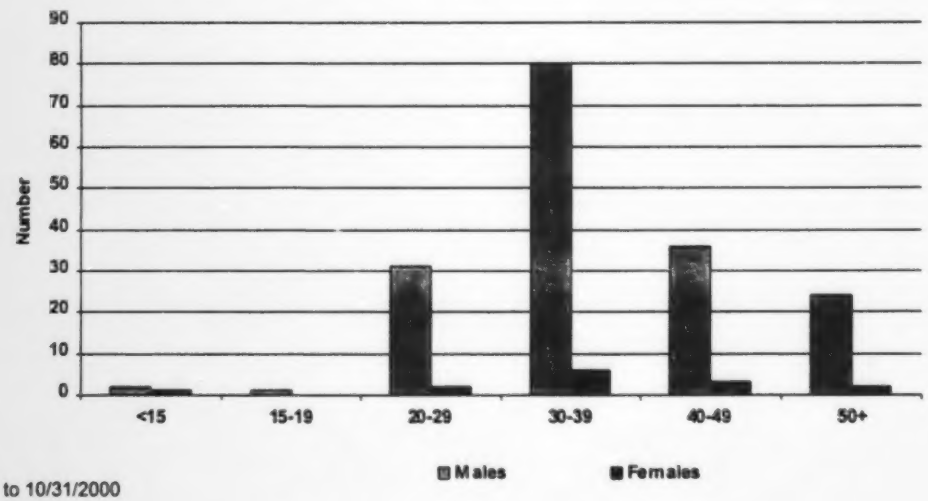
to 10/31/2000

Table 6. NUMBER OF REPORTED CASES OF AIDS BY AGE AND GENDER, 2000*, 1999, CUMULATIVE 1985-1998 AND 1985-2000*

Age	Gender	2000*	1999	1985-1998	1985-2000*
		JAN-OCT	Total	Total	Total
<15	M	0	0	2	2
	F	0	0	1	1
15-19	M	0	0	1	1
20-29	M	1	1	29	31
	F	0	0	2	2
30-39	M	2	4	74	80
	F	1	1	4	6
40-49	M	4	3	29	36
	F	0	1	2	3
50+	M	2	2	20	24
	F	0	0	2	2
Total	M	9	10	155	174
	F	1	2	11	14

* to 10/31/2000

Figure 6. NUMBER OF REPORTED CASES OF AIDS BY AGE AND GENDER, 1985-2000*



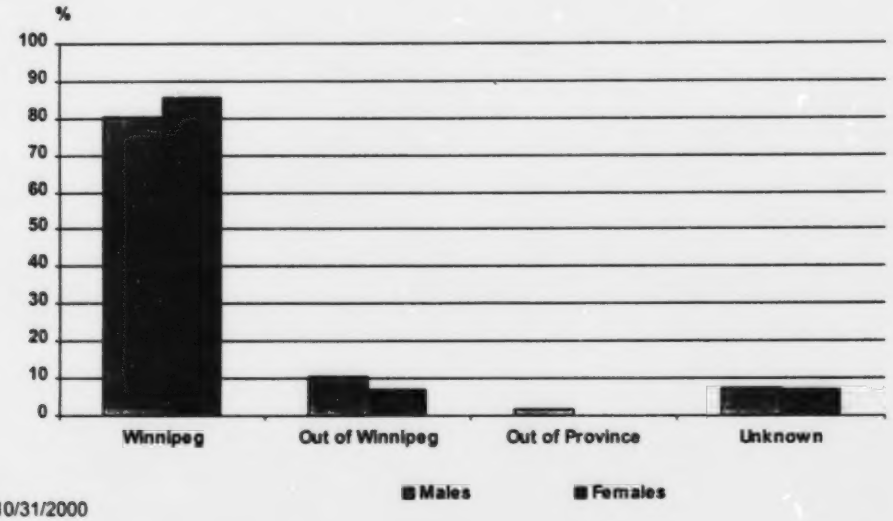
to 10/31/2000

Table 7. NUMBER OF REPORTED CASES OF AIDS BY GEOGRAPHIC RESIDENCE AND GENDER, 2000*, 1999, CUMULATIVE 1985-1998 AND 1985-2000*

Geographic Residence	Gender	2000*	1999	1985-1998	1985-2000*
		JAN-OCT	Total	Total	Total
Winnipeg	M	7	8	125	140
	F	1	2	9	12
Brandon	M	0	0	4	4
Marquette	M	0	1	1	2
S. Westman	M	0	1	0	1
Interlake	M	0	0	4	4
Central	M	0	0	1	1
Parkland	M	1	0	2	3
	F	0	0	1	1
Norman	M	0	0	1	1
Burntwood	M	0	0	2	2
Unknown	M	1	0	12	13
	F	0	0	1	1
Out of Province	M	0	0	3	3
Total	M	9	10	155	174
	F	1	2	11	14

* to 10/31/2000

Figure 7. PERCENTAGE OF AIDS CASES IN MANITOBA BY REGION OF RESIDENCE AND GENDER, 1985-2000*



to 10/31/2000

Table 8. NUMBER OF REPORTED CASES OF AIDS BY TRANSMISSION CATEGORY AND GENDER, 2000*, 1999, CUMULATIVE 1985-1998 AND 1985-2000*

Transmission Category	Gender	2000*	1999	1985-1998	1985-2000*
		JAN-OCT	Total	Total	Total
MSM	M	3	4	118	125
Heterosexual'	M	4	3	5	12
	F	1	2	4	7
IDU	M	1	1	12	14
	F	0	0	2	2
Perinatal	M	0	0	1	1
	F	0	0	1	1
Recp B/B products	M	0	1	14	15
	F	0	0	2	2
Endemic"	M	0	0	3	3
	F	0	0	2	2
NIR	M	1	1	2	4
Total	M	9	10	155	174
	F	1	2	11	14

MSM = men having sex with men

IDU = injection drug use

Recp B/B products = recipient of blood/blood product

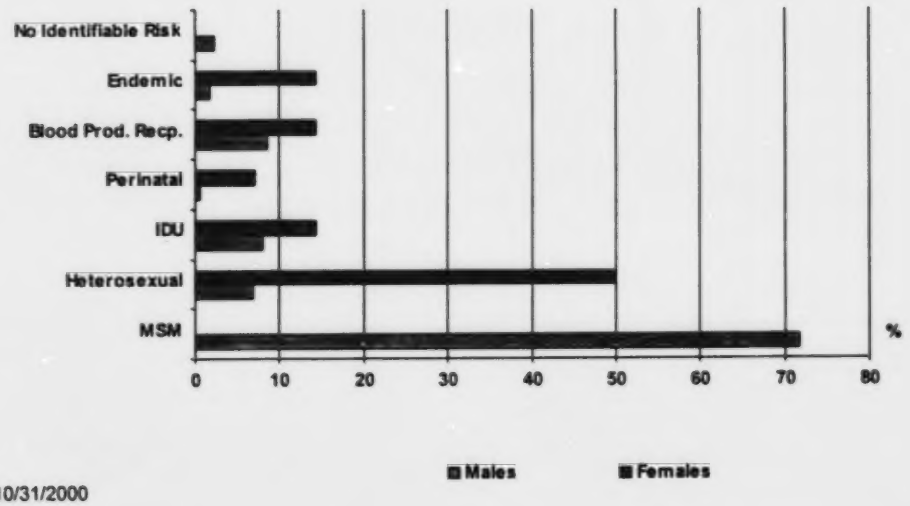
NIR = No Identified Risk

' Heterosexual activity includes persons reporting heterosexual activity with person(s) at risk of HIV infection

" Endemic includes persons originating from or residing in countries with a high prevalence of HIV

* to 10/31/2000

Figure 8. PERCENTAGE OF AIDS CASES IN MANITOBA BY TRANSMISSION CATEGORY AND GENDER, 1985-2000*



to 10/31/2000

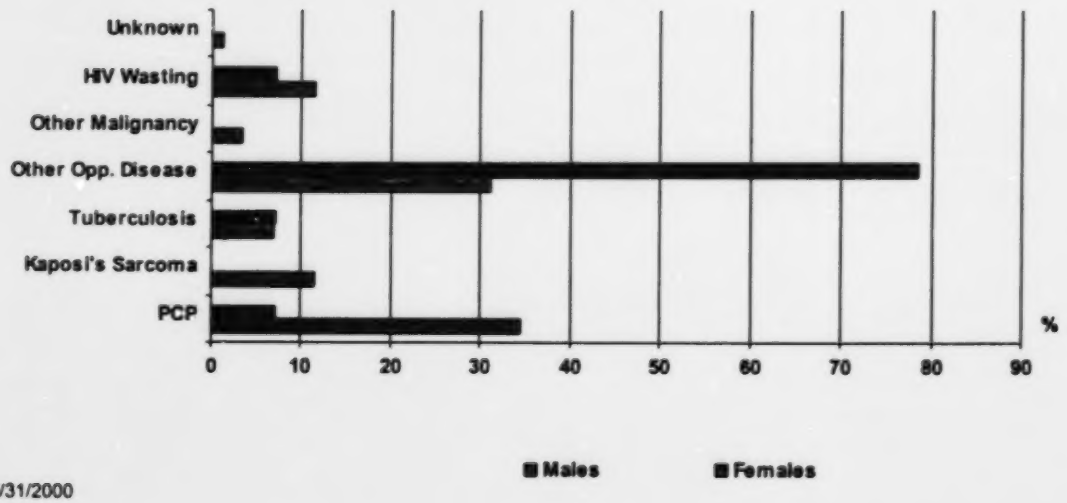
Table 9. NUMBER OF REPORTED CASES OF AIDS BY PRIMARY DIAGNOSIS AND GENDER, 2000*, 1999, CUMULATIVE 1985-1998 AND 1985-2000*

Primary Diagnosis	Gender	2000*	1999	1985-1998	1985-2000*
		JAN-OCT	Total	Total	Total
PCP	M	1	3	56	60
	F	0	0	1	1
Kaposi's Sarcoma	M	1	2	17	20
Tuberculosis	M	2	2	8	12
	F	0	0	1	1
Other Opportunistic Diseases	M	1	1	52	54
	F	1	2	8	11
Other Malignancy	M	1	0	5	6
HIV Wasting	M	3	1	16	20
	F	0	0	1	1
Unknown	M	0	1	1	2
Total	M	9	10	155	174
	F	1	2	11	14

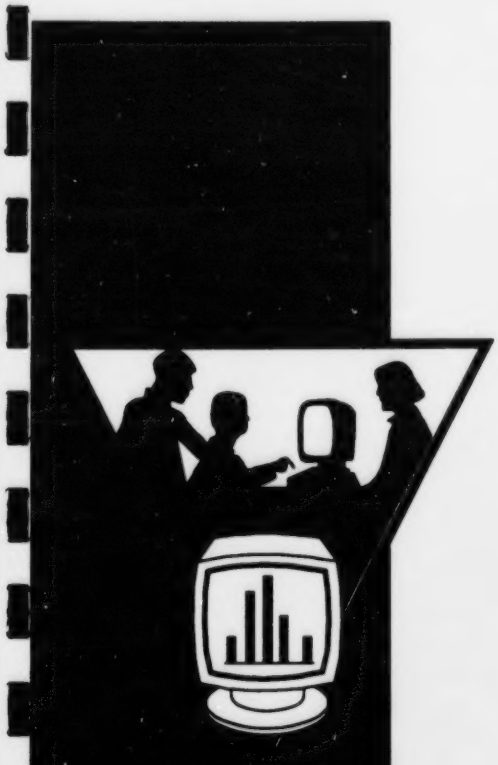
PCP = pneumocystis carinii pneumonia

* to 10/31/2000

Figure 9. PERCENTAGE OF AIDS CASES IN MANITOBA BY PRIMARY DIAGNOSIS, 1985-2000*



to 10/31/2000



Manitoba Health Statistical Update on HIV/AIDS

1985 - NOV 2000

CDC Unit
Public Health Branch
Manitoba Health

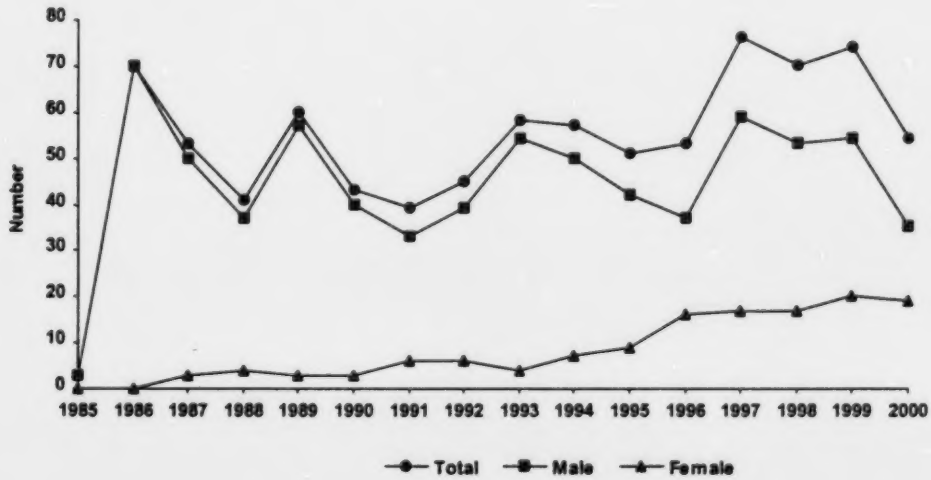
MANITOBA HEALTH

Table 1. NUMBER OF INDIVIDUALS TESTING HIV ANTIBODY POSITIVE, 1985-2000*

Year	Male	Female	Total
1985	3	0	3
1986	70	0	70
1987	50	3	53
1988	37	4	41
1989	57	3	60
1990	40	3	43
1991	33	6	39
1992	39	6	45
1993	54	4	58
1994	50	7	57
1995	42	9	51
1996	37	16	53
1997	59	17	76
1998	53	17	70
1999	54	20	74
2000	35	19	54
Total	713	134	847

* to 11/15/2000

Figure 1. NUMBER OF INDIVIDUALS TESTING HIV ANTIBODY POSITIVE, 1985-2000*



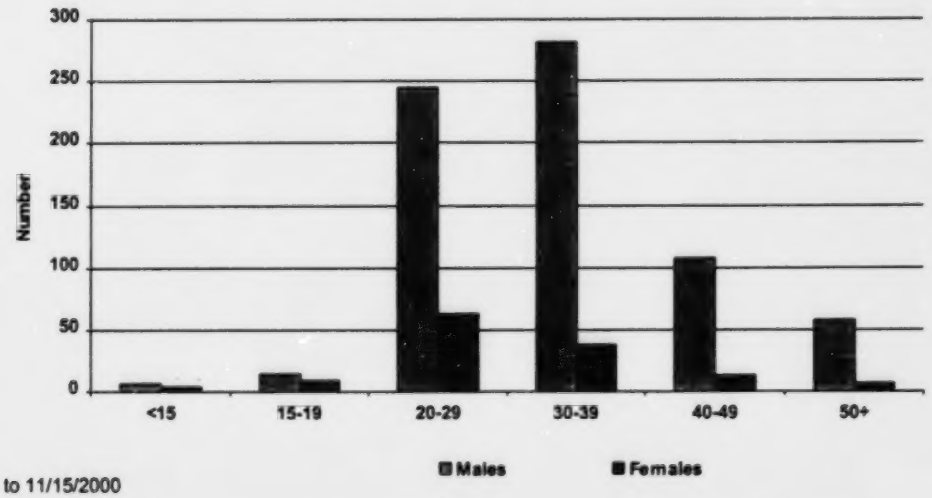
to 11/15/2000

Table 2. NUMBER OF INDIVIDUALS TESTING HIV ANTIBODY POSITIVE BY AGE AND GENDER, 2000*, 1999, CUMULATIVE 1985-1998 AND 1985-2000*

Age	Gender	2000*	1999	1985-1998	1985-2000*
		JAN-NOV	Total	Total	Total
<15	M	0	1	5	6
	F	0	0	4	4
15-19	M	1	0	13	14
	F	1	1	7	9
20-29	M	6	8	231	245
	F	12	9	42	63
30-39	M	15	31	236	282
	F	3	6	29	38
40-49	M	7	7	94	108
	F	2	4	7	13
50+	M	6	7	45	58
	F	1	0	6	7
Total	M	35	54	624	713
	F	19	20	95	134

* to 11/15/2000

Figure 2. NUMBER OF INDIVIDUALS TESTING HIV ANTIBODY POSITIVE BY AGE AND GENDER, 1985-2000*

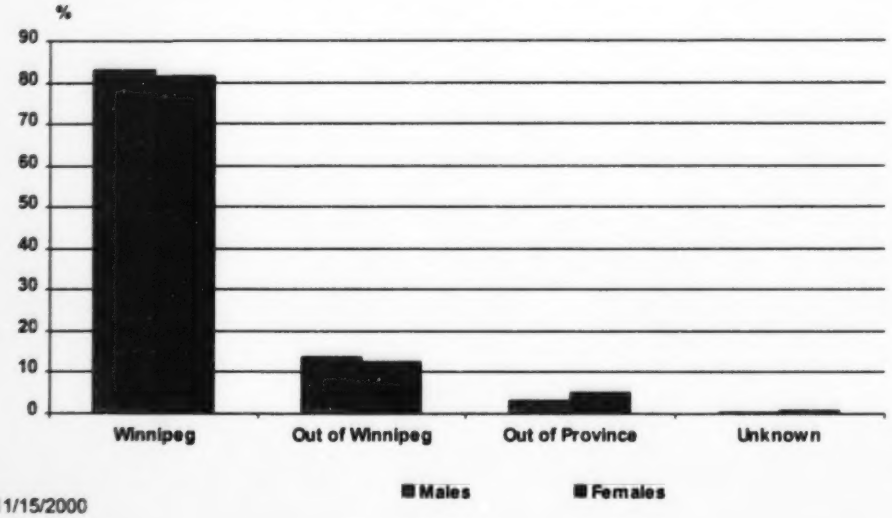


to 11/15/2000

Table 3. NUMBER OF INDIVIDUALS TESTING HIV ANTIBODY POSITIVE BY GEOGRAPHIC RESIDENCE AND GENDER, 2000*, 1999, CUMULATIVE 1985-1998 AND 1985-2000*

Geographic Residence	Gender	2000*	1999	1985-1998	1985-2000*
		JAN-NOV	Total	Total	Total
Winnipeg	M	28	44	520	592
	F	14	17	78	109
Brandon	M	1	0	0	1
Brandon, Marquette, S. Westman	M	0	1	17	18
	F	0	0	1	1
N. Eastman	M	0	1	0	1
	F	0	1	0	1
S. Eastman	M	0	1	0	1
N. Eastman, S. Eastman	M	0	0	11	11
	F	0	0	2	2
Interlake	M	1	3	20	24
	F	1	0	2	3
Central	M	3	2	21	26
	F	3	0	3	6
Parkland	M	0	1	4	5
	F	0	0	1	1
Norman	M	0	0	3	3
	F	1	0	0	1
Burntwood	M	2	1	4	7
	F	0	1	1	2
Unknown	M	0	0	2	2
	F	0	1	0	1
Out of Province	M	0	0	22	22
	F	0	0	7	7

Figure 3. PERCENTAGE OF HIV POSITIVE INFECTIONS IN MANITOBA BY REGION OF RESIDENCE AND GENDER, 1985-2000*



to 11/15/2000

Table 4. NUMBER OF INDIVIDUALS TESTING HIV ANTIBODY POSITIVE BY TRANSMISSION CATEGORY AND GENDER, 2000*, 1999, CUMULATIVE 1985-1998 AND 1985-2000*

Transmission Category	Gender	2000*	1999	1985-1998	1985-2000*
		JAN-NOV	Total	Total	Total
MSM	M	10	15	379	404
MSM/IDU	M	0	4	40	44
Heterosexual'	M	13	14	75	102
	F	7	10	39	56
IDU	M	7	10	64	81
	F	7	4	34	45
Perinatal	M	0	1	1	2
	F	0	0	1	1
Recp B/B products	M	0	3	25	28
	F	0	1	5	6
Endemic"	M	1	3	16	20
	F	2	1	9	12
NIR	M	4	4	25	33
	F	3	4	6	13
Total	M	35	54	625	714
	F	19	20	95	134

MSM = men having sex with men

IDU = injection drug use

Recp B/B products = recipient of blood/blood product

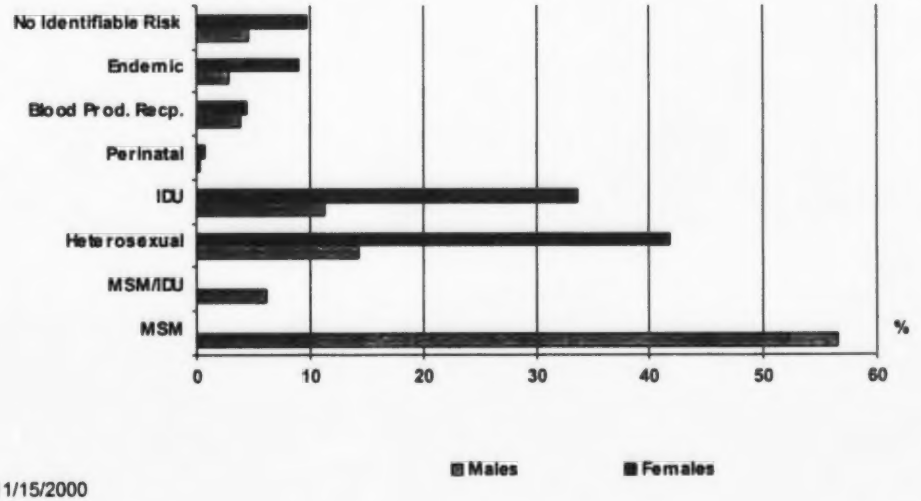
NIR = No Identified Risk

' Heterosexual activity includes persons reporting heterosexual activity with person(s) at risk of HIV infection

" Endemic includes persons originating from or residing in countries with a high prevalence of HIV

* to 11/15/2000

Figure 4. PERCENTAGE OF HIV POSITIVE INFECTIONS IN MANITOBA BY TRANSMISSION CATEGORY, 1985-2000*



to 11/15/2000

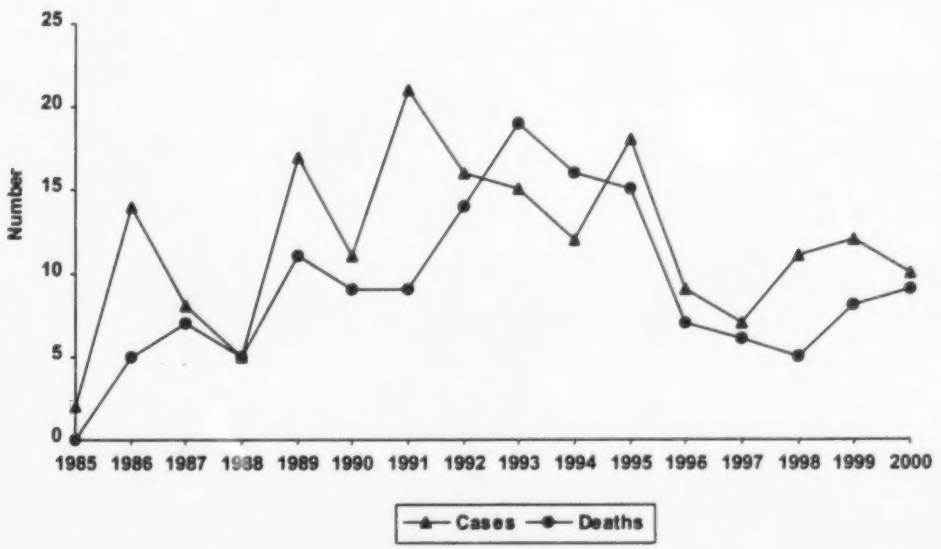
Table 5. NUMBER OF REPORTED AIDS CASES AND DEATHS, 1985-2000*

Year	Cases Reported"	Deaths Reported"
1985	2	0
1986	14	5
1987	8	7
1988	5	5
1989	17	11
1990	11	9
1991	21	9
1992	16	14
1993	15	19
1994	12	16
1995	18	15
1996	9	7
1997	7	6
1998	11	5
1999	12	8
2000	10	9
Total	188	145

" Because of delays in reporting, the number of reported cases and deaths does not necessarily represent the number of cases diagnosed or deaths occuring during the period.

* to 11/15/2000

Figure 5. NUMBER OF REPORTED AIDS CASES AND DEATHS, 1985-2000*



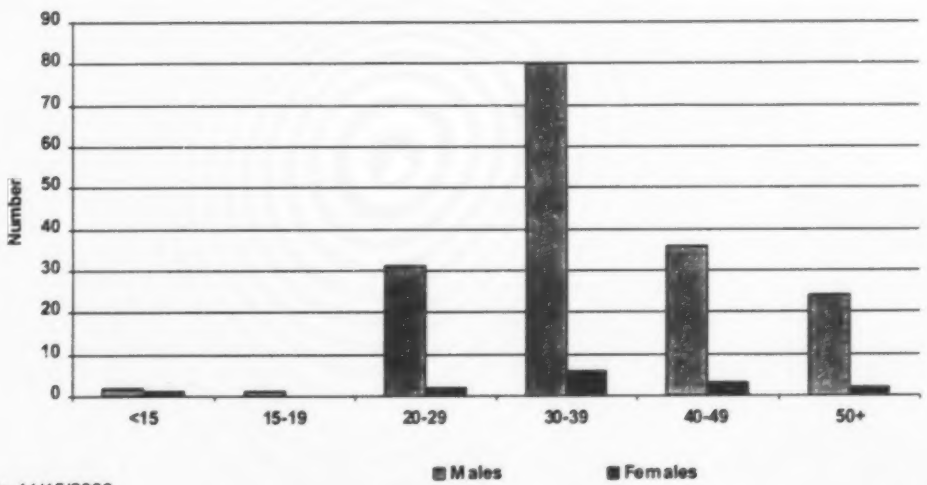
to 11/15/2000

Table 6. NUMBER OF REPORTED CASES OF AIDS BY AGE AND GENDER, 2000*, 1999, CUMULATIVE 1985-1998 AND 1985-2000*

Age	Gender	2000*	1999	1985-1998	1985-2000*
		JAN-NOV	Total	Total	Total
<15	M	0	0	2	2
	F	0	0	1	1
15-19	M	0	0	1	1
20-29	M	1	1	29	31
	F	0	0	2	2
30-39	M	2	4	74	80
	F	1	1	4	6
40-49	M	4	3	29	36
	F	0	1	2	3
50+	M	2	2	20	24
	F	0	0	2	2
Total	M	9	10	155	174
	F	1	2	11	14

* to 11/15/2000

Figure 6. NUMBER OF REPORTED CASES OF AIDS BY AGE AND GENDER, 1985-2000*



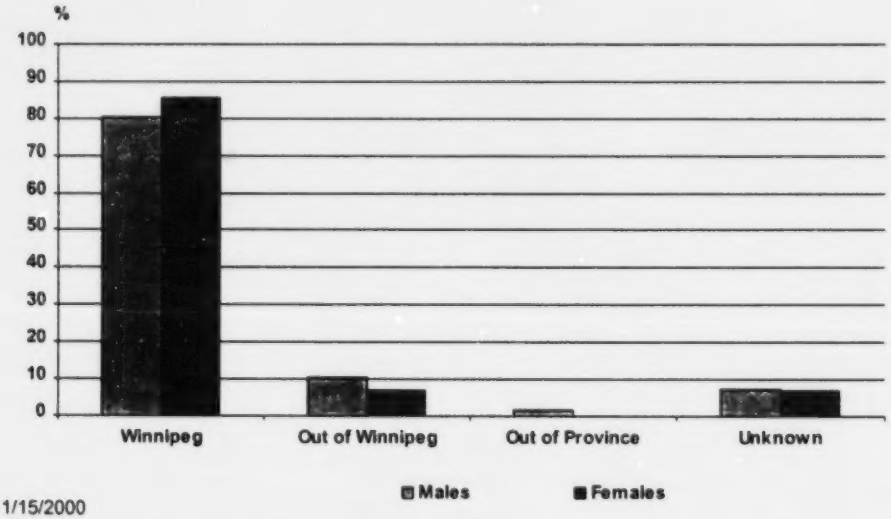
to 11/15/2000

Table 7. NUMBER OF REPORTED CASES OF AIDS BY GEOGRAPHIC RESIDENCE AND GENDER, 2000*, 1999, CUMULATIVE 1985-1998 AND 1985-2000*

Geographic Residence	Gender	2000*	1999	1985-1998	1985-2000*
		JAN-NOV	Total	Total	Total
Winnipeg	M	7	8	125	140
	F	1	2	9	12
Brandon	M	0	0	4	4
Marquette	M	0	1	1	2
S. Westman	M	0	1	0	1
Interlake	M	0	0	4	4
Central	M	0	0	1	1
Parkland	M	1	0	2	3
	F	0	0	1	1
Norman	M	0	0	1	1
Burntwood	M	0	0	2	2
Unknown	M	1	0	12	13
	F	0	0	1	1
Out of Province	M	0	0	3	3
Total	M	9	10	155	174
	F	1	2	11	14

* to 11/15/2000

Figure 7. PERCENTAGE OF AIDS CASES IN MANITOBA BY REGION OF RESIDENCE AND GENDER, 1985-2000*



to 11/15/2000

Table 8. NUMBER OF REPORTED CASES OF AIDS BY TRANSMISSION CATEGORY AND GENDER, 2000*, 1999, CUMULATIVE 1985-1998 AND 1985-2000*

Transmission Category	Gender	2000*	1999	1985-1998	1985-2000*
		JAN-NOV	Total	Total	Total
MSM	M	3	4	118	125
Heterosexual'	M	4	3	5	12
	F	1	2	4	7
IDU	M	1	1	12	14
	F	0	0	2	2
Perinatal	M	0	0	1	1
	F	0	0	1	1
Recp B/B products	M	0	1	14	15
	F	0	0	2	2
Endemic"	M	0	0	3	3
	F	0	0	2	2
NIR	M	1	1	2	4
Total	M	9	10	155	174
	F	1	2	11	14

MSM = men having sex with men

IDU = injection drug use

Recp B/B products = recipient of blood/blood product

NIR = No Identified Risk

' Heterosexual activity includes persons reporting heterosexual activity with person(s) at risk of HIV infection

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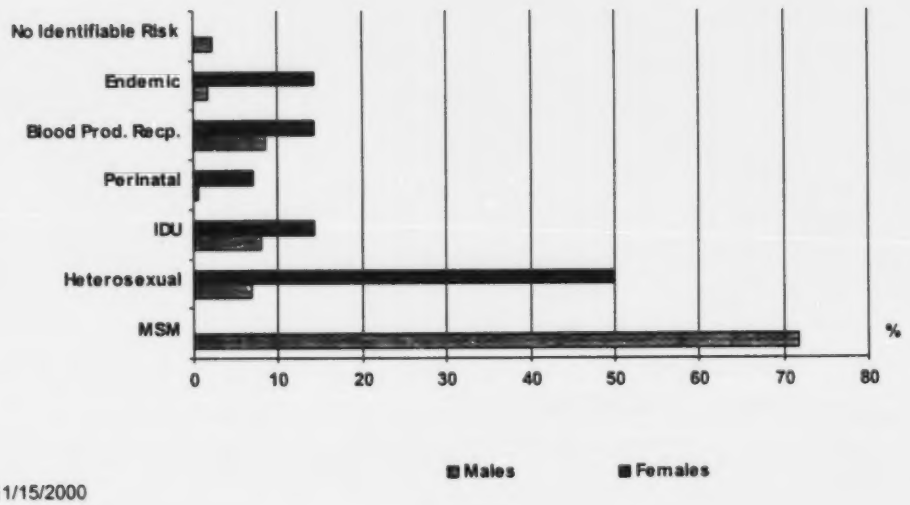
* to 11/15/2000

Figure 8. PERCENTAGE OF AIDS CASES IN MANITOBA BY TRANSMISSION CATEGORY AND GENDER, 1985-2000*



to 11/15/2000

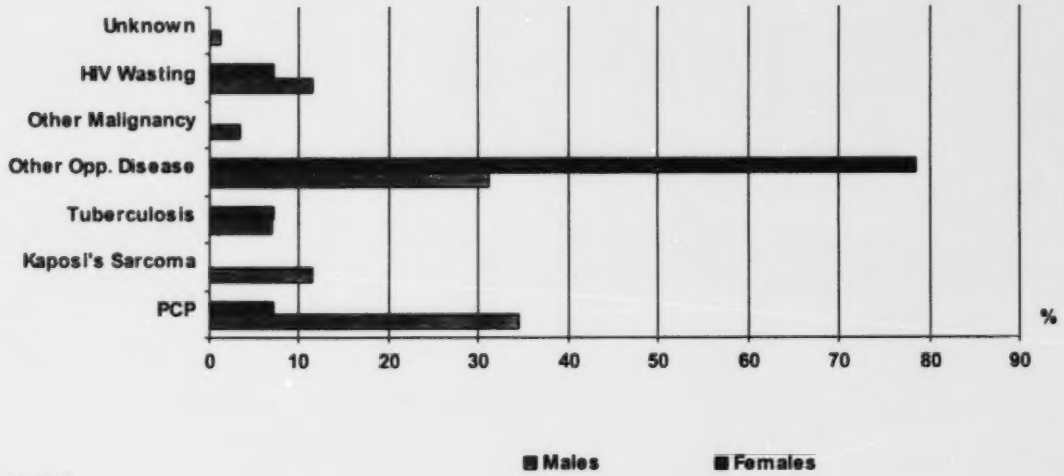
Table 9. NUMBER OF REPORTED CASES OF AIDS BY PRIMARY DIAGNOSIS AND GENDER, 2000*, 1999, CUMULATIVE 1985-1998 AND 1985-2000*

Primary Diagnosis	Gender	2000*	1999	1985-1998	1985-2000*
		JAN-NOV	Total	Total	Total
PCP	M	1	3	56	60
	F	0	0	1	1
Kaposi's Sarcoma	M	1	2	17	20
Tuberculosis	M	2	2	8	12
	F	0	0	1	1
Other Opportunistic Diseases	M	1	1	52	54
	F	1	2	8	11
Other Malignancy	M	1	0	5	6
HIV Wasting	M	3	1	16	20
	F	0	0	1	1
Unknown	M	0	1	1	2
Total	M	9	10	155	174
	F	1	2	11	14

PCP = pneumocystis carinii pneumonia

* to 11/15/2000

Figure 9. PERCENTAGE OF AIDS CASES IN MANITOBA BY PRIMARY DIAGNOSIS, 1985-2000*



to 11/15/2000

Health Canada Santé Canada

HIV/AIDS *Epi Update*

Bureau of HIV/AIDS, STD and TB Update Series
Centre for Infectious Disease Prevention and Control

November 2000

National HIV Prevalence and Incidence Estimates for 1999: No Evidence of a Decline in Overall Incidence

Introduction

This report outlines estimates of the total number of Canadians who were living with HIV infection to the end of 1999 (prevalence) and the number of individuals who became newly infected in 1999 (incidence). It updates previous estimates produced in 1996. These national estimates of HIV prevalence and incidence are an integral part of the work produced by the Bureau of HIV/AIDS, STD and TB. They are used as a tool to monitor the HIV epidemic, to help evaluate and guide prevention efforts and as part of on-going risk assessment and management work conducted by the Bureau.

Methods

HIV prevalence and incidence estimates at the national level are estimated by a combination of different methods using data from a wide variety of sources, such as AIDS case reports, provincial HIV testing databases, population-based surveys, targeted epidemiological studies and census data.

Prevalence and incidence estimates are derived separately for the following exposure categories: men who have sex with men (MSM), injecting drug users (IDU), MSM-IDU, heterosexuals (includes sub-categories of heterosexual contact with a person at risk for HIV, origin in a country where HIV is endemic and heterosexual as the only identified risk) and other (includes recipients of clotting factor or blood products, perinatal and occupational transmission).

Two main methods are used to estimate both HIV prevalence and incidence: a direct and an indirect method.

i) Using the direct method, the number of prevalent infections is calculated by multiplying the prevalence rate by the estimated population size. The number of incident infections is derived by multiplying the incidence rate by the estimated population at risk (total population for that group minus those already infected with HIV). Prevalence and incidence rates are estimated from targeted epidemiological studies; population sizes are derived using a variety of methods, including projected population estimates, population-based surveys, and capture-recapture analyses (for IDU).

ii) Two indirect methods are used together to estimate HIV prevalence, and they are both based on the number of HIV diagnoses (obtained from provincial HIV testing databases) and on information about HIV testing behaviour (obtained from population surveys). In the first method, the cumulative number of HIV diagnoses (minus cumulative AIDS deaths) is divided by the proportion of

the population who have ever been tested for HIV. In the second method, the number of HIV diagnoses in 1999 is divided by the proportion of the population who are tested in a one-year period, and the result is then added to the cumulative number of HIV diagnoses to the end of 1998 (minus cumulative AIDS deaths) plus the estimate for 1999 HIV incidence.

HIV incidence is derived using an indirect method by taking the difference between the 1999 and 1996 prevalence estimates and adding 1997-1999 AIDS deaths. The result is an estimate of the number of new infections occurring during 1997-99 which is divided by three to estimate the number during 1999.

These methods are carried out separately for the provinces of British Columbia, Alberta, Ontario and Quebec. These four provinces account for 85% of the population of Canada and for 95% of HIV and AIDS diagnoses in Canada. For each exposure category in the four largest provinces, the mean of the direct and indirect methods is taken as the point estimate for both prevalence and incidence. Ranges of uncertainty are calculated using statistical simulation procedures.

The rest of the provinces and territories are grouped into Saskatchewan/Manitoba/Northwest Territories/Yukon/Nunavut and the Atlantic provinces (Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland). These two groups are extrapolated separately from the four-province estimates using regional distributions in the AIDS case and HIV test report databases.

Prevalence and Incidence Results

As outlined in Table 1, there were an estimated 49,800 people in Canada living with HIV infection (includes those living with AIDS) at the end of 1999 compared with an estimated 40,100 at the end of 1996. This represents an increase of 24%.

An estimated 4,190 Canadians became newly infected with HIV in 1999, compared with almost the same estimate in 1996 (Table 2). Although the estimated incidence in 1999 was essentially unchanged from 1996, the distribution among exposure categories changed significantly. From 1996 to 1999, there was a 30% increase in the number of new infections per year among MSM (from 1,240 to 1,610) and a 27% decline in the number of new infections among IDU (from 1,970 to 1,430).

Table 1: Point estimates and uncertainty ranges for number of prevalent HIV infections in Canada at the end of 1999 compared with point estimates for 1996, by exposure category

	MSM	MSM-IDU	IDU	Hetero	Other	Total
1999 Range	29,600 (26,000-33,400)	2,100 (1,700-2,600)	9,700 (8,100-11,800)	8,000 (6,300-10,100)	400 (330-470)	49,800 (45,000-54,600)
1996	25,300	1,700	7,100	5,500	500	40,100

Table 2: Point estimates and uncertainty ranges for number of incident HIV infections in Canada in 1999 compared with point estimates in 1996, by exposure category

	MSM	MSM-IDU	IDU	Hetero	Other	Total
1999 Range	1,610 (1,190-2,060)	270 (190-360)	1,430 (1,030-1,860)	880 (610-1,170)	0	4,190 (3,310-5,150)
1996	1,240	290	1,970	700	0	4,200

Source: Bureau of HIV/AIDS, STD and TB, Centre for Infectious Disease Prevention and Control, Health Canada, November 2000

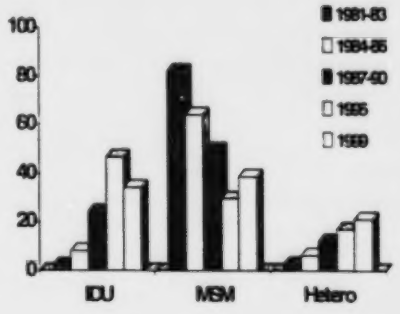
There has been a rise in the number of prevalent and incidence infections among heterosexuals. The estimated prevalent number of infections to 1999 is 8000, 45% higher than the estimate of 5,500 in 1996. The number of new infections among heterosexuals increased 26% over this same time period, from 700 to 880 new infections per year.

An attempt was made to separate the heterosexual subcategories to estimate what proportion of the epidemic can be attributed to individuals from a country where HIV is endemic. Based on the proportions in reported HIV positive test reports and AIDS cases, it is estimated that this group represents approximately 20% to 30% of the heterosexual exposure category in the national prevalence and incidence estimates. It is important to note that there is considerable variation in this proportion between provinces, and that this estimate is quite uncertain since a large proportion of HIV test reports do not contain complete exposure category information.

Trends in Exposure Category among New Infections

The distributions of exposure categories among new HIV infections shown in Figure 1 clearly outline the changes in the HIV epidemic in Canada. Prior to 1999, there was a steady increase in the proportion of IDUs among new infections, from 24% during 1987-1990 to 47% in 1996. However, 1999 incidence estimates indicate that the proportion of IDUs among new infections has now dropped to 34%. Conversely, the proportion of MSM among new infections demonstrated a steady decline until 1996, from over 80% in 1981-1983 to 30% in 1996. Recently, however, there has been a sharp increase in new infections among MSM to 38% in 1999. The proportion of new infections attributed to the heterosexual exposure category has increased steadily in the last two decades reaching 21% of new infections by 1999.

Figure 1: Estimated exposure category distribution (%) among new HIV infections in Canada, by time period



Trends among Women and Aboriginal Populations

An estimated 6,800 women were living with HIV infection at the end of 1999, a 48% increase from the 1996 prevalence estimate of 4,600 (Figure 2). In 1999, women accounted for 14% of the prevalent HIV infections compared to 11% in 1996. The number of newly infected women remained just below 1,000 cases per year in both 1996 and 1999 (950 and 917 respectively). In 1999, 54% of all new HIV infections among women were attributed to IDU and 46% were attributed to the heterosexual exposure category.

The estimated number of prevalent HIV infections among Aboriginal populations was 1,430 in 1996 and increased 91% to 2,740 prevalent HIV infections in 1999 (Figure 3). This represents 5.5% of all prevalent HIV infections in Canada in 1999. There were 370 new infections among Aboriginal populations in 1999 (9% of all new HIV infections), 64% of which were attributed to the exposure category IDU, 17% were attributed to heterosexuals, 11% to MSM and 8% to MSM-IDU.

Figure 2: Estimated number of prevalent and incident HIV infections among women, by exposure category and year

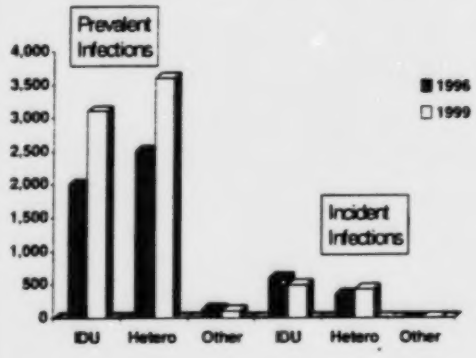
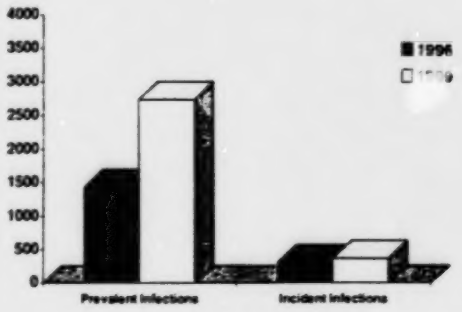


Figure 3: Estimated number of prevalent and incident HIV infections among Aboriginal populations, by year



Comment

The methods employed to estimate HIV prevalence and incidence make maximum use of a wide variety of surveillance and research data. The resulting estimates are necessarily imprecise, but the degree of certainty is improved by using independent methods in a combined approach. The advantages of this approach are its flexibility and its ability to readily incorporate new data and to highlight gaps in existing knowledge. The fact that the methods to estimate national trends of HIV are largely determined by data from large cities is a major limitation. These estimates do not, therefore, necessarily reflect local trends of HIV incidence and prevalence in Canada.

The 1999 estimates clearly illustrate the changing face of the Canadian HIV epidemic. They highlight a potential resurgence of the epidemic among MSM and an increasing urgency of the situation among Aboriginal populations. Although the estimates indicate a reduction in incidence among IDUs, the absolute number of new infections per year is still unacceptably high in this exposure category.

These findings will be important for the purposes of planning and evaluation of prevention and care programs in Canada. They indicate the urgency to strengthen and improve these programs and they provide further evidence for the need to enhance existing surveillance and analysis. Furthermore, these results underscore the fact that it is not yet time to reduce vigilance with respect to HIV and AIDS in Canada.

References

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